

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND PROTECTION DIVISION**

IN THE MATTER OF:

Evans & Associates Construction
Company, Inc.,

Respondent.

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Case No. 16-353

OKLAHOMA
DEPT. OF ENVIRONMENTAL QUALITY

MAR 13 2017

FILED BY: 
HEARING CLERK

CONSENT ORDER

The parties to this case, the Oklahoma Department of Environmental Quality ("DEQ") and Evans & Associates Construction Company, Inc., ("Respondent"), agree to this Consent Order ("Order") in order to establish a schedule to obtain all necessary permit coverage.

FINDINGS OF FACT

1. Respondent owns and operates the Big Fork Ranch Coal Combustion Residuals Landfill ("Facility"), located within the West half of Section 8 and the South half of the Southwest quarter of Section 5, Township 24 North, Range 3 East, Noble County, Oklahoma.
2. Respondent has been operating the Facility under a non-coal mining permit issued by the Oklahoma Department of Mines. The Facility receives fly ash and bottom ash, produced by an electric utility, for purposes of disposal and mining reclamation activities.
3. On November 1, 2016, Title 45 Okla. Stat. ("O.S.") § 940 was amended to remove a DEQ permit exemption for non-coal mining operations receiving fly ash, bottom ash and other coal combustion materials for disposal.
4. On November 30, 2016, DEQ and Respondent discussed entering into a consent order to establish a schedule to apply for all the necessary permit coverage. That discussion forms the basis of this Order.

5. Respondent and DEQ agree that it is beneficial to resolve this matter promptly and by agreement.

6. Respondent and DEQ waive the filing of a petition or other pleading, and Respondent waives the right to a hearing.

CONCLUSIONS OF LAW

7. DEQ has regulatory jurisdiction and authority in this matter, and Respondent is subject to the jurisdiction and authority of DEQ under the OKLAHOMA SOLID WASTE MANAGEMENT ACT, 27A O.S. §§ 2-10-101 *et seq.*, and the rules promulgated thereunder at OKLAHOMA ADMINISTRATIVE CODE ("OAC"), Title 252, Chapter 517, *Disposal of Coal Combustion Residuals from Electric Utilities*, and also as set out in 45 O.S. § 940(A).

8. Respondent and DEQ are authorized by 75 O.S. § 309(E) and 27A O.S. § 2-3-506(B) to resolve this matter by agreement.

9. 27A O.S. § 2-10-301(A) states in part:

1. No person shall dispose of solid waste at any site or facility other than a site or facility for which a permit for solid or hazardous waste disposal has been issued by the Department of Environmental Quality.

2. No person shall own or operate a site or facility at which solid waste is disposed other than a site or facility for which a permit for solid or hazardous waste disposal has been issued by the Department;

3. No person shall knowingly transport solid waste to an unpermitted site or facility.

10. Pursuant to 27A O.S. § 2-10-103(20), "solid waste" is defined as the following:

all putrescible and nonputrescible refuse in solid, semisolid, or liquid form including, but not limited to, garbage, rubbish, ashes or incinerator residue, street refuse, dead animals, demolition waste, construction waste, roofing material, solid and semisolid commercial and industrial wastes including explosives, biomedical wastes, chemical wastes, herbicide and pesticide wastes.

11. Pursuant to 27A O.S. § 2-10-103(5), "disposal site" is defined as the following:

any place, including, but not limited to a transfer station or roofing material recycling facility, at which solid waste is dumped, abandoned, or accepted or disposed of by

incineration, landfilling, composting, shredding, compaction, baling or any other method or by processing by pyrolysis, resource recovery or any other method, technique or process designed to change the physical, chemical, or biological character or composition of any solid waste so as to render such waste safe or nonhazardous, amendable to transport, recovery or storage or reduced in volume. A disposal site shall not include a manufacturing facility which processes scrap materials which have been separated for collection and processing as industrial raw materials.

12. 45 O.S. § 940(A) states:

All fly ash, bottom ash or any other such material produced by coal combustion, power-generating facilities shall be exempt from all solid waste permitting requirements pursuant to Title 27A of the Oklahoma Statutes, provided such ash is constructively reutilized, or disposed of in any active or inactive coal mining operation subject to the provisions contained in Title 45 of the Oklahoma Statutes. The disposal of fly ash, bottom ash or any other such material generated by the burning of coal for the purpose of generating electricity by electric utilities and independent power producers in any noncoal mining operation shall be subject to the solid waste permitting requirements in Title 27A of the Oklahoma Statutes.

13. Pursuant to OAC 252:517-1-3, “coal combustion residuals (CCR)”, “CCR landfill”, and “CCR Unit” are defined as follows:

“Coal combustion residuals (CCR)” means fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers.

“CCR landfill” or “landfill” means an area of land or an excavation that receives CCR and which is not a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground or surface coal mine, or a cave. For purposes of this Chapter, a CCR landfill also includes sand and gravel pits and quarries that receive CCR, CCR piles, and any practice that does not meet the definition of a beneficial use of CCR.

“CCR unit” means any CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit, or a combination of more than one of these units, based on the context of the paragraph(s) in which it is used. This term includes both new and existing units, unless otherwise specified.

14. OAC 252:517-1-7(a) *Permit required* states:

All CCR units must be permitted in accordance with the rules of this Chapter.

Following the statutory change referenced above, Respondent is now operating an unpermitted solid waste disposal site, more specifically defined as a CCR unit, as set out in Paragraph 2. Respondent is required to be permitted in accordance with the Environmental Quality Code and associated rules.

ORDER

15. Based on the above paragraphs, Respondent and DEQ agree, and it is ordered by the Executive Director, as follows:

a. Respondent shall submit closure and post-closure plans meeting the requirements of OAC 252:517-15 to DEQ for approval **within 30 days of the execution of this Order.**

b. Respondent shall submit closure and post-closure cost estimates meeting the requirements of OAC 252:517-17 to DEQ for approval **within 30 days of approval of the closure and post-closure plans** as required by Paragraph 15(a).

c. Respondent shall establish financial assurance in accordance with OAC 252:517-17 **within 60 days of approval of closure and post-closure cost estimates** as required by Paragraph 15(b).

d. Respondent shall submit an application meeting the requirements of OAC 252:4 and OAC 252:517 and apply for all necessary permit coverage **within 180 days of the execution of this Order**, or in the alternative, discontinue all operations at the Facility that require a DEQ issued permit.

e. In the event Respondent is unable to acquire a permit for the disposal of CCR, the Facility must initiate closure in accordance with OAC 252:517-15.

f. Respondent agrees to allow representatives of DEQ access to the Facility at reasonable times for purposes of inspecting to determine compliance with applicable Oklahoma statutes and regulations.

g. Upon the execution of this Order, Respondent shall follow all recordkeeping, notification, and posting requirements of OAC 252:517-19.

h. Respondent shall immediately cease accepting and processing CCR at the Facility upon notification by DEQ that Respondent is not in compliance with this Order. Failure to timely respond to any notice of deficiency or request for information constitutes noncompliance with the Order.

GENERAL PROVISIONS

16. Respondent agrees to perform the requirements of this Order within the time frames specified unless performance is prevented or delayed by events which are a "force majeure." For purposes of this Order, a force majeure event is defined as any event arising from causes beyond the reasonable control of Respondent or Respondent's contractors, subcontractors or laboratories which delays or prevents the performance of any obligation under this Order. Examples are vandalism; fire; flood; labor disputes or strikes; weather conditions which prevent or seriously impair construction activities; civil disorder or unrest; and "acts of God." Force majeure events do not include increased costs of performance of the tasks agreed to in this Order, or changed economic circumstances. Respondent must notify DEQ in writing within fifteen (15) days after Respondent knows or should have known of a force majeure event that is expected to cause a delay in achieving compliance with any requirement of this Order. Failure to submit notification within fifteen (15) days waives the right to claim force majeure.

17. Upon their approval by DEQ, any final reports, plans, specifications, schedules and attachments required under this Order are incorporated into it and enforceable under it. Failure of Respondent to reply within a reasonable time to any errors, deficiencies or other regulatory requirements identified by DEQ pursuant to this Order is a violation of this Order.

18. No informal advice, guidance, suggestions or comments by employees of DEQ regarding reports, plans, specifications, schedules, and other writings affect Respondent's obligation to obtain written approval by DEQ, when and if required by this Order.

19. Unless otherwise specified, any report, notice, or communication required under this Order shall be in writing and shall be sent to:

For the Department of Environmental Quality:

Kelly Dixon, Director
Land Protection Division
P.O. Box 1677
Oklahoma City, OK 73101-1677

With Copies to:

Thomas R. Alford, Environmental Attorney
Office of General Counsel
P.O. Box 1677
Oklahoma City, OK 73101-1677

For Respondent:

Lee Evans, Chairman
Evans & Associates Construction Company, Inc.
P.O. Box 30
Ponca City, OK 74602

20. This Order is enforceable as a final order of the Executive Director of DEQ. DEQ retains jurisdiction of this matter for the purposes of interpreting, implementing and enforcing the terms and conditions of this Order and for the purpose of resolving disputes regarding the interpretation of this Order.

21. Nothing in this Order limits DEQ's right to take enforcement action for violations discovered or occurring after the effective date of this Order.

22. Nothing in this Order excuses Respondent from its obligation to comply with all applicable federal, state and local statutes, rules and ordinances. Respondent and DEQ agree that the provisions of this Order are considered severable, and if a court of competent jurisdiction finds any provisions to be unenforceable because they are inconsistent with state or federal law, the remaining provisions will remain in full effect.

23. The provisions of this Order apply to and bind Respondent and DEQ and their officers, directors, employees, agents, successors and assigns. No change in the ownership or corporate status of Respondent will affect Respondent's responsibilities under this Order.

24. Compliance with the terms and conditions of this Order fully satisfies Respondent's liability to DEQ for all items of noncompliance identified in this Order. If Respondent satisfies the requirements of this Order, DEQ will not pursue any other remedy, sanction or relief that might otherwise be available to address the issues of noncompliance in this Order. Nothing in this Order shall be deemed to satisfy Respondent's liability, if any, for actions or remedies not within the scope of authority of DEQ.

25. Respondent and DEQ agree that the venue of any action in District Court for the purposes of interpreting, implementing and enforcing this Order will be Oklahoma County, Oklahoma.

26. The requirements of this Order will be considered satisfied and this Order terminated when Respondent receives written notice from DEQ that Respondent has demonstrated all the terms of the Order have been completed to the satisfaction of DEQ, and that any assessed penalty has been paid.

27. Respondent and DEQ may amend this Order by mutual consent. Such amendments must be in writing and the effective date of any such amendments will be the date on which they are filed by DEQ.

28. The individuals signing this Order certify that they are authorized to sign and to legally bind the parties they represent.

29. This Order shall become effective on the date of the later of the two signatures below.

Date: 3/3/17

Date: 3-13-17

**EVANS & ASSOCIATES CONSTRUCTION
COMPANY, INC.**



**Lee Evans
Chairman**

**OKLAHOMA DEPARTMENT OF
ENVIRONMENTAL QUALITY**



**Scott A. Thompson
Executive Director**

Jeff Biddick

From: Saeed Zahrai <mszahrai@gmail.com>
Sent: Tuesday, February 27, 2018 10:27 AM
To: Jeff Biddick
Subject: Re: 3rd Q 2017 Groundwater Monitoring for E and A

Categories: Important

Good Morning Jeff,

Yes, groundwater elevations were measured. We will provide all information required in accordance with OAC 252:517-9-1(e)(1).

Thanks,
Saeed

On Mon, Feb 26, 2018 at 3:33 PM, Jeff Biddick <Jeff.Biddick@deq.ok.gov> wrote:

Thanks Saeed, this electronic copy will be fine.

Were groundwater elevations measured during any of these sampling events? Please provide a map showing monitoring well locations and recent groundwater contours (if available), in addition to any other information that is available per OAC 252:517-9-1(e)(1) through (5). For the next annual groundwater report, we will need to make sure all of this information is provided, including groundwater elevations, rate and direction of groundwater flow, and statistical analysis results.

Thank you, and feel free to call me if you'd like to discuss.

Regards,

Jeff Biddick, E.I.

Land Protection Division

Oklahoma Department of Environmental Quality

(405) 702-5141

jeff.biddick@deq.ok.gov

From: Saeed Zahrai [mailto:mszahrai@gmail.com]
Sent: Monday, February 26, 2018 2:07 PM

To: Jeff Biddick
Subject: Re: 3rd Q 2017 Groundwater Monitoring for E and A

Good Afternoon Jeff,

Please refer to the attached file regarding the results of the groundwater monitoring report, and let me know whether you would like to have a hard copy.

Thank you for all your help.

Regards,

Saeed Zahrai, P. E.

President

EMERA, Corp.

P. O. Box 2228

Edmond, OK 73083

405-820-2222 Cell

405-557-0000 Office

405-348-0021 Fax

mszahrai@gmail.com

On Tue, Feb 20, 2018 at 11:03 AM, Jeff Biddick <Jeff.Biddick@deq.ok.gov> wrote:

Thanks Saeed. I think this is the first I've seen it. A couple things:

FYI, according to the CCR rules, the results of the semi-annual monitoring events are to be submitted in the annual groundwater monitoring and corrective action report (first one was due Jan. 31, 2018, then yearly thereafter). In other words, although monitoring is conducted semi-annually, the reports only need to be submitted annually. See 252:517-9-1(e)(3).

You had mentioned that the first annual report would be submitted in a couple months when all wells completed the required 8 independent samples, correct? Please note that the 8 independent samples must include both Appendix A (detection) and Appendix B (assessment) parameters.

Please call me if this is not clear.

Regards,

Jeff Biddick, E.I.

Land Protection Division

Oklahoma Department of Environmental Quality

(405) 702-5141

jeff.biddick@deg.ok.gov

From: Saeed Zahrai [mailto:mszahrai@gmail.com]
Sent: Friday, February 16, 2018 5:45 PM
To: Jeff Biddick
Subject: 3rd Q 2017 Groundwater Monitoring for E and A

Hello Jeff,

I am not sure whether I send a copy of the attached report to you in September.

Thanks,

Saeed



SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN
Governor

April 12, 2018

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Lee Evans
Evans & Associates Construction Company, Inc.
P.O. Box 30
Ponca City, OK 74602

Re: Recordkeeping and Groundwater Reporting Requirements
Big Fork Ranch Coal Combustion Residuals (CCR) Landfill
Noble County

Dear Mr. Evans:

This letter serves as notification that Big Fork has not fully complied with the recordkeeping, notification, and posting requirements of Oklahoma Administrative Code (OAC) 252:517-19 and paragraph 15(g) of Consent Order Case No. 16-353 (CO). The following documents have not yet been posted to Big Fork's publicly accessible Internet site, resulting in failure to comply with paragraph 15(g) of the CO.

- Initial run-on/run-off control plan – OAC 252:517-19-3(g)(3)
- Annual groundwater monitoring & corrective action report – OAC 252:517-19-3(h)(1)
- Groundwater monitoring system certification – OAC 252:517-19-3(h)(2)
- Selection of a statistical method certification – OAC 252:517-19-3(h)(3)
- Closure plan – OAC 252:517-19-3(i)(4)
- Post-closure plan – OAC 252:517-19-3(i)(12)

DEQ has received the above documents as part of the new Tier III permit application for Big Fork, but none have been posted to the facility's CCR website. The timeline for posting required documents to the CCR website is within 30 days of placing them into the facility operating record. Please place the above documents as standalone files in addition to the full Tier III permit application to Big Fork's CCR website within 15 days of receipt of this letter.

It is noted that the Fugitive Dust Control Plan, Annual Fugitive Dust Control Report, and Periodic Inspection by a Professional Engineer have been posted to Big Fork's CCR website in accordance with OAC 252:517-19-3(g)(1), (2), and (7).

DEQ would also like to remind you of the groundwater reporting requirements. In accordance with OAC 252:517-9-1(e) and (g), the annual groundwater monitoring and corrective action

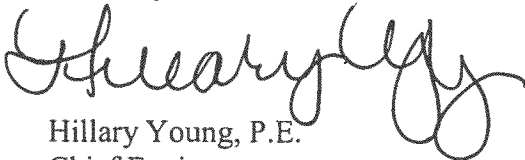


Mr. Lee Evans
April 12, 2018
Page 2 of 2

report was to be submitted to DEQ for review and approval by January 31, 2018. DEQ was notified that Big Fork would not meet the deadline due to additional time needed to collect eight independent background samples. DEQ received laboratory results of sampling activities conducted throughout 2017 but did not receive a full report containing the information required by OAC 252:517-9-1(e)(1) through (5). DEQ requested additional information for the report in an email dated February 26, 2018 and subsequent telephone call. Please provide a revised annual report within 30 days of receipt of this letter. This report must be placed on Big Fork's CCR website as noted above.

Failure to respond within specified timelines could result in escalated enforcement actions. Should you have any questions regarding this letter, please contact Jeff Biddick at (405) 702-5141.

Sincerely,

A handwritten signature in black ink, appearing to read "Hillary Young", with a stylized flourish at the end.

Hillary Young, P.E.
Chief Engineer
Land Protection Division

HY/jb

cc: Saeed Zahrai, P.E., P.O. Box 2228, Edmond, OK 73083



SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN
Governor

March 13, 2018

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Lee Evans
Evans & Associates Construction Company, Inc.
P.O. Box 30
Ponca City, OK 74602

Re: Notice of Deficiency
Tier III New Permit Application
Big Fork Ranch Coal Combustion Residuals Landfill
Noble County

NOTICE OF DEFICIENCY

Dear Mr. Evans:

The Oklahoma Department of Environmental Quality (DEQ) received the Tier III Permit Application on October 11, 2017 from Emera Corporation on behalf of Evans and Associates Construction Co., Inc. (Evans). The Application is for a new permit for the Big Fork Ranch Coal Combustion Residuals (CCR) Landfill (Facility) which was previously permitted under the Oklahoma Department of Mines.

The Application is divided into sections that are labeled by the rule in Oklahoma Administrative Code (OAC) 252:517 to which they refer. To avoid confusion, references within the Application will be referred to as "sections", while references to official state rules will be referred to as "rule" or will be preceded by "OAC". DEQ has completed a technical review of the Application and has identified the following deficiencies:

1. Section 252:517-3-1(b) and 252:517-3-3 of the Application state that the Facility is currently permitted by the Oklahoma Department of Mines (ODM). A surety bond has been established with DEQ, and the Facility is no longer under jurisdiction of ODM. Please remove language stating that the Facility is currently permitted by ODM.
2. 252:517-3-1(c) Cessation of Operations
Please revise this section of the Application to state that the Facility will follow the closure timelines described in OAC 252:517-15-7(e).



3. 252:517-3-35 Existing Contour Map

The surface contours shown in the maps stop around the northern portion of the site and do not depict site topography near the stormwater outfall. Please revise the maps to show topography for all areas within the permit boundary.

4. 252:517-3-46 Completion Map

The Final Closure Map, MP-10, appears to show elevations as of June 2017. Please revise MP-10 to show anticipated top of final contours in accordance with OAC 252:517-3-46.

5. 252:517-5-5 Unstable Areas

This section of the Application states, "Certification the Big Fork Ranch facility is not in an unstable area by an Oklahoma Registered Professional Engineer appears in Appendix E." Appendix E does not contain the certification. However, this certification is not required for CCR units not located in unstable areas. Please correct this language.

6. 252:517-9-4(f) Number of Samples

The intent of this rule is to establish the number of samples collected per monitoring well per sampling event based on the statistical method and performance standards of OAC 252:517-9-4(g) and (h), respectively. This is reiterated in OAC 252:517-9-5(c) and 252:517-9-6(b).

Section 252:517-9-4(f) of the Application does not make it clear how many samples will be taken during each detection monitoring and assessment monitoring event. Please include this information.

7. 252:517-9-5(b) Monitoring Frequency

This section of the Application states, "A minimum of eight (8) independent samples from each background and downgradient well will be collected and analyzed for the constituents listed above no later than October 17, 2017. As of June 2017, twenty (21) samples from each of the monitoring wells have been collected as required by this section."

The October 17, 2017 deadline has passed. As of the date of this letter, the four existing monitoring wells at the Facility have not completed the initial eight sampling events. Please revise this section of the application to state that background monitoring is currently being conducted for Appendix A and Appendix B parameters and that the 21 samples noted were for a different set of constituents required by the Department of Mines.

8. 252:517-9-5(c) Number of Samples

Please correct the citation in this section to 252:517-9-4(f). This was a typographical error in OAC 252:517 and will be corrected.

9. 252:517-9-5(e) Statistically Significant Increase

Please correct the citation in the first sentence of this section to OAC 252:517-9-4(i).

10. 252:517-9-6(b) Initiation and Number of Samples

Please correct the last sentence of this section to say, "The number of samples collected and analyzed for each well during each sampling event must be consistent with OAC 252:517-9-4(f), and must account for any unique characteristics of the site, but must be at least one sample from each well." Please also correct Section 252:517-9-6(d)(1) of the Application to reflect this language.

11. 252:517-9-9(c)(2)

Please correct the citations in the last sentence of this paragraph to "Sections 252:517-9-4(g) and (h)."

12. 252:517-13-2(a) Run-on/Run-off Control Systems

This section of the Application states, "The run-on control system consists of Berm/Channel Nos. 3 and 6, which are designed to divert the discharge from a 25-year, 24-hour storm event away from active CCR cells." However, calculations were not provided for Berm/Channel No. 6, and Berm/Channel No. 6 is not shown on the provided maps. If Berm/Channel No. 6 is still in use, then please provide more information for Berm/Channel No. 6.

13. 252:517-15-7(b) Written closure plan

In accordance with OAC 252:517-15-7(b)(4), the owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the closure plan meets the requirements of OAC 252:517-15-7(b). This certification was not provided in the Application.

14. 252:517-15-9(d) Written post-closure plan

In accordance with OAC 252:517-15-9(d)(4), the owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the post-closure plan meets the requirements of OAC 252:517-15-9(d). This certification was not provided in the Application.

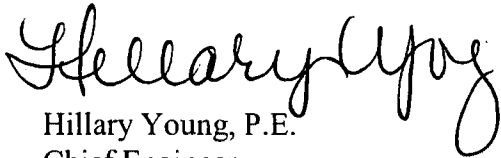
15. The Application notes that the Facility is an existing CCR landfill and is therefore not required to comply with rules that are specific to new CCR units or lateral expansions of the permit boundary and/or waste boundary (e.g., subsurface investigation, design

Mr. Lee Evans
March 13, 2018
Page 4 of 4

criteria, and some location restrictions). Although not applicable at this time, please note that compliance with these rules will be required should Evans decide to expand the Facility in the future.

Please respond to the above items within 180 days of the date of this letter. Should you have any questions, please contact Jeff Biddick at (405) 702-5141.

Sincerely,

A handwritten signature in black ink, appearing to read "Hillary Young". The signature is fluid and cursive, with the first name "Hillary" and last name "Young" clearly distinguishable.

Hillary Young, P.E.
Chief Engineer
Land Protection Division

HY/jb

cc: Saeed Zahrai, P.E., P.O. Box 2228, Edmond, OK 73083



SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN
Governor

March 20, 2018

Mr. Michael Bednar, Environmental Compliance Superintendent
Grand River Dam Authority
P.O. Box 70
Langley, OK 74350

Re: 2017 Annual Groundwater Monitoring and Corrective Action Report, Grand River Dam
Authority (GRDA) Landfill, Mayes County, Permit Number 3549012

Dear Mr. Bednar:

The Oklahoma Department of Environmental Quality (DEQ) received the above referenced Report dated January 31, 2018. The Report was submitted to comply with Oklahoma Administrative Code (OAC) 252:517-9-1(e).

The Report includes: documentation of the status of groundwater monitoring and corrective action at the facility for the previous year, a summary of key actions completed, a description of any problems encountered, a discussion of actions to resolve any problems, and key activities for the up-coming year.

Semi-annual groundwater monitoring was conducted on June 6, 2017 and November 7, 2017. GRDA is currently in assessment monitoring for pH in MW 93-2. No new constituents were added to the assessment monitoring program during 2017. Background sampling for boron and fluoride were completed during 2017. In the coming year, background sampling for OAC 252:517 Appendix A & B constituents for which eight independent samples have not been established shall be conducted.

The report is accepted as submitted. Groundwater statistical analysis was submitted in semi-annual reports this year. Please include all statistical analysis conducted for the facility during semi-annual sampling in future annual reports. If you have any questions or comments, please contact Martha Grafton at (405) 702-5144.

Sincerely,

Hillary Young, P.E.
Chief Engineer
Land Protection Division

HY/mg

cc: Tom Trebonik, A & M Engineering and Environmental Services, Inc.





SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN
Governor

November 29, 2017

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. Michael Bednar, Environmental Compliance Superintendent
Grand River Dam Authority
P.O. Box 70
Langley, OK 74350

Re: Groundwater Sampling and Analysis Program Plan
Grand River Dam Authority (GRDA)
Permit Number 3549012
Mayes County

NOTICE OF DEFICIENCY

Dear Mr. Bednar:

On October 18, 2017 the Department of Environmental Quality (DEQ) received the proposed "Groundwater Sampling and Analysis Program" Plan dated October 18, 2017, A&M Engineering and Environmental Services (A&M) submitted for GRDA. The Plan was submitted in accordance with OAC 252:517-9-1(b)(1)(B).

DEQ has reviewed the Plan and has the following comments:

1. References to 40 CFR §257 are made throughout the Plan. Please update the Plan to reference OAC 252:517 instead.
2. Please include in the Plan a quarterly monitoring schedule for OAC 252:517 Appendix A and B parameters to obtain the minimum eight (8) background samples necessary for detection monitoring per OAC 252:517-9-5(b).

If you have any questions, please contact Martha Grafton of my staff at (405) 702-5144.

Sincerely,

Hillary Young, P.E.
Chief Engineer
Land Protection Division

HY/mg

cc: Tom Trebonik, A&M Engineering

707 NORTH ROBINSON, P.O. BOX 1677, OKLAHOMA CITY, OKLAHOMA 73101-1677

printed on recycled paper with soy ink





SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN
Governor

March 13, 2018

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. Michael Bednar, Environmental Compliance Superintendent
Grand River Dam Authority
P.O. Box 70
Langley, OK 74350

Re: Tier I Modification – Groundwater Sampling and Analysis Plan
Grand River Dam Authority (GRDA) Landfill
Mayes County
Permit Number 3549012

Dear Mr. Bednar:

On January 8, 2018 the Department of Environmental Quality (DEQ) received the Tier I Modification application dated January 3, 2018 in response to an NOD dated November 29, 2017. The Modification is to update the Groundwater Sampling and Analysis Plan to be in compliance with Oklahoma Administrative Code (OAC) 252:517.

DEQ has completed the technical review of the Modification and found it compliant with Oklahoma Administrative Code (OAC) 252:517 regulations. Pursuant to OAC 252:4-7-58(2), the submittal was processed as a Tier I application. DEQ approves this permit modification, which is effective on the date that it is signed. Please be aware, the background sampling should have been completed by October 17, 2017, in accordance with OAC 252:517-9-1(b)(1).

The Modification noted background has been established for some parameters in Appendix A and B of OAC 252:517 and requested an accelerated background sampling period of six (6) months for the remaining parameters. An accelerated background sampling period is acceptable; however, it shall be conducted with eight evenly spaced sampling events over a one year period.

If you have any questions, please contact Martha Grafton at (405) 702-5144.

Sincerely,

Hillary Young, P.E.
Chief Engineer
Land Protection Division

HY/mg





SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN
Governor

SOLID WASTE PERMIT MODIFICATION

The Department of Environmental Quality hereby approves the following modification:

Permit Number: 3549012
Facility: Grand River Dam Authority
Facility Type: Coal Combustion Residuals Landfill
County: Mayes County

Modification: This modification updates the Groundwater Sampling and Analysis Program to be in compliance with OAC 252:517 regulations.

Modification Conditions:

1. The permit modification application received on January 8, 2018 is considered approved and incorporated as part of this modification.
2. Background sampling shall be conducted for the parameters in Appendix A and B of OAC 252:517 for which background has not yet been established.
3. An accelerated background sampling period shall be conducted for the above constituents with eight evenly spaced sampling events over a one year period.

The permittee is authorized to operate in conformity with the application described above. Commencing operations under this modification constitutes acceptance of, and consent to, the conditions contained herein.

Hillary Young, P.E.
Chief Engineer
Land Protection Division

Date: 3-13-18





SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN
Governor

January 4, 2016

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Ms. Jill Parker-Witt, P.E.
American Electric Power
502 North Allen Avenue
Shreveport, LA 71101

Re: Liner Installation and Testing Report – Cell 2 and Leachate Collection System
Construction Report
Public Service Company of Oklahoma
Northeastern Power Station Ash Landfill
Rogers County
Solid Waste Permit No. 3566010

Dear Ms. Parker-Witt:

On November 12, 2015, the Department of Environmental Quality (DEQ) received the Cell 2 Liner Installation and Testing Report (LIT) and the Leachate Collection System Construction Report (Leachate) from Terracon Consultants, Inc. (Terracon) on behalf of Northeastern Power Station Ash Landfill (Landfill). Supplemental information was received on November 20, 2015 by email from Terracon. The Landfill submitted additional information by email on December 30, 2015. DEQ approved the construction permit modification on January 31, 2013.

The Landfill is a permitted non-hazardous industrial waste (NHIW) landfill that accepts coal combustion residuals (CCR) that are generated on-site. The composite liner is laid on top of the existing CCR disposal cell as a remedial measure to address groundwater contamination. DEQ approved the Landfill to excavate to subgrade then construct four (4) new cells with composite liners on top of the existing CCR disposal area. The 6.2 acre Cell 2 is the first cell to complete construction. Leachate from Cell 2 will be collected and routed to an approximately 2 acre on-site storage pond that was constructed simultaneously.

Due to sampling problems with the ash liner material, the liner verification was modified to include remolding of the samples at the lab to document the ash liner permeability was less than 1.0×10^{-5} cm/sec. The areas where samples failed were resampled and reviewed by the project engineer. The construction details for both Cell 2 and the Leachate Storage Pond are summarized below.

Subgrade construction – Cell 2

Excavation during March 2015 through July 2015

Optimum Moisture Content 26.2%

Measured Moisture Content 24.4% - 33.2%



Subgrade construction – Leachate Storage Pond

Excavation during July 2015
Optimum Moisture Content 12.7% -18.6%
Proctor Density 90.0% - 102.7%

Compacted Ash Liner Construction – Cell 2

Construction July 16, 2015 through August 4, 2015
Optimum Moisture Content 17.5% - 25.3%
Measured Moisture Content 24.0% - 30.6%
Measured Permeability 1.0×10^{-5} cm/sec to 4.0×10^{-6} cm/sec

Compacted Ash Liner Construction – Leachate Storage Pond

Construction July 13, 2015 through July 21, 2015
Optimum Moisture Content 26.2% - 30.8%
Measured Moisture Content 24.1% - 34.0%
Analyzed hydraulic conductivity range: 4.0×10^{-5} cm/sec to 4.2×10^{-5} cm/sec

Geosynthetics installation – Cell 2

August 6, 2015 through August 21, 2015

Geosynthetics installation – Leachate Storage Pond

July 22, 2015 through September 10, 2015

Drainage/ protective cover layer placement – Cell 2

August 26, 2015 through September 14, 2015
Analyzed bottom ash hydraulic conductivity: 2.51×10^{-2} cm/sec to 5.92×10^{-2} cm/sec

Drainage/ protective cover layer placement – Leachate Storage Pond

September 2, 2015 through September 15, 2015

As required by Oklahoma Administrative Code (OAC) 252:515-11-7, DEQ inspected the liner system during construction on April 24, 2015. The construction on Cell 2 and the leachate storage pond was proceeding as designed. The leachate collection system was cleaned out on November 18, 2015 in accordance with OAC 252:515-13-34(a). The leachate collection header pipes are required to be cleaned out again after placement of the first lift of waste, and once per year thereafter. The LIT and Leachate reports comply with the requirements of the OAC 252:515 regulations and are approved.

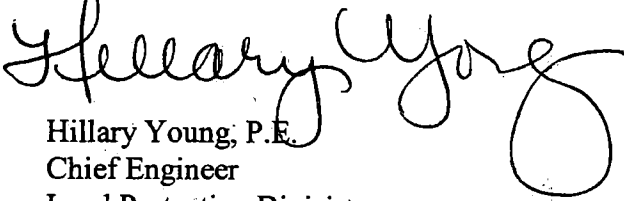
OAC 252:515-27-31(d) and 32(d) require closure and post-closure cost estimates and the amount of financial assurance to be increased if facility conditions increase the maximum costs. OAC 252:515-27-4(a) also requires an annual update to be submitted no later than April 9,

Ms. Jill Parker-Witt, P.E.
American Electric Power
January 4, 2016
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2015. The closure and post-closure cost estimates were updated for Cell 2 and the Leachate Storage Pond.

Cell 2 and the Leachate Storage pond are approved to accept waste. If you have any questions, please contact Ms. Cindy Hailes at (405) 702-5114.

Sincerely,

A handwritten signature in cursive script, reading "Hillary Young". The signature is written in black ink and is positioned above the printed name and title.

Hillary Young, P.E.
Chief Engineer
Land Protection Division

HY/ckh

cc: F. Owen Carpenter, P.E., P.G., Terracon Consultants, Inc.
Brad N. Fureigh, P.E., Terracon Consultants, Inc.

File Copy: Solid Waste Permit No. 3566010



SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN
Governor

January 16, 2018

Ms. Jill Parker-Witt, P.E.
American Electric Power
502 North Allen Avenue
Shreveport, LA 71101r

Re: Groundwater Monitoring Network for CCR Compliance – Landfill
Public Service Company of Oklahoma-Northeastern Power Station
Rogers County
Solid Waste Permit No. 3566010

Dear Ms. Parker-Witt:

On October 19, 2017, the Oklahoma Department of Environmental Quality (DEQ) received Report 1 – Groundwater Monitoring Network for CCR Compliance for the Non-Hazardous Industrial Waste Landfill (Report) from American Electric Power – Public Service Company of Oklahoma (AEP-PSO) for the Northeastern Power Station (NPS). The Report was submitted for compliance with OAC 252:517-9-1(b).

The existing monitoring well network surrounding the landfill consists of monitoring wells MW1S, MW2S, MW3S, MW4S, MW5S, MW6S, MW7S, MW8S, MW9S, MW10S, MW11S, MW12S, MW13S, MW1D, MW2D, MW3D, MW4D, MW5D, MW6D, MW7D, MW8D, MW9D, MW10D, MW11D, MW12D, MW13D, MW-14, MW-15, MW-16 and MW-17. Thirteen shallow monitoring wells, MW1S-13S, are screened primarily in the gravelly clay, ash and limestone. Fifteen deeper monitoring wells, MW1D, MW3D, MW5D, MW6D, MW7D, MW8D, MW9D, MW10D, MW11D, MW12D, MW13D, MW-14, MW-15, MW-16 and MW-17 are constructed primarily in the Labette shale. Monitoring wells MW2D and MW4D are screened in both the limestone and shale.

A 2,200 foot long slurry wall/grout curtain was constructed in 2011 on the southeastern border of the landfill as a barrier to mitigate contaminated groundwater seeping into the Verdigris River. Monitoring wells MW13S, MW13D, MW2S, MW2D, MW9S, MW9D, MW6S, MW6D, MW3S, and MW3D were constructed between the slurry wall and the Verdigris River to monitor groundwater and determine the performance of the slurry wall/grout curtain.

AEP-PSO evaluated the existing network as required by OAC 252:517-9-2 and proposes to cease monitoring all shallow groundwater wells (MW1S, MW2S, MW3S, MW4S, MW5S, MW6S, MW7S, MW8S, MW9S, MW10S, MW11S, MW12S, MW13S) and some of the deeper shale wells (MW1D, MW2D, MW4D, MW5D, MW10D, MW11D, MW12D, MW13D, MW-14, MW-16 and MW-17). AEP-PSO has proposed to monitor MW7D and MW8D as the upgradient



monitoring wells and MW3D, MW6D, MW9D, and MW15 as the downgradient monitoring wells.

DEQ has evaluated the proposal and has the following concerns:

1. Monitoring wells MW13S, MW13D, MW2S, MW2D, MW9S, MW6S, MW3S, and MW3D in addition to MW6D and MW9D are needed to monitor the performance of the slurry wall/grout curtain.

The proposed monitoring network does not adequately monitor the performance of the slurry wall/grout curtain. Groundwater in MW9S consistently shows levels of arsenic, lead, mercury, nickel, selenium, vanadium and an elevated pH greater than 12. Some of the aforementioned monitoring wells that are dry at sampling events document the ability of the slurry wall/grout curtain to prevent seepage of contaminated groundwater.

2. Monitoring wells MW13S and MW13D, located south of the southern end of the slurry wall/grout curtain, are needed to detect groundwater contamination that may flow around the end of the slurry wall/grout curtain and seep into the Verdigris River.

The proposed monitoring network does not adequately monitor groundwater south of the slurry wall without MW13S and MW13D. Trace amounts of chromium, nickel, and vanadium have been measured in MW13S and MW13D.

3. AEP-PSO submitted the Groundwater Sampling and Analysis Plan (SAP) separately and it will be addressed in a separate letter; however, the proposed monitoring network discontinues the sampling of monitoring wells that have low volume, low yield or are consistently dry without attempting alternative sampling methods.

AEP-PSO has not addressed alternative sampling methods prior to removing monitoring wells from the existing network. Additionally, monitoring wells located east of the landfill, that are dry; indicate the positive performance of the slurry wall/grout curtain to curtail groundwater seepage to the Verdigris River.

DEQ suggests the following to address its concerns:

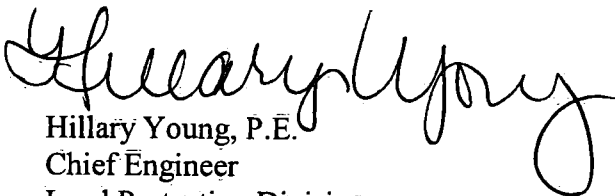
- AEP-PSO separates the existing monitoring network into a performance monitoring network and a groundwater monitoring network. The performance monitoring network, consisting of monitoring wells MW13S, MW2S, MW9S, and MW3S are to be sampled semi-annually to determine the performance of the slurry wall/grout curtain in the limestone and gravelly clay. When all background data samples in MW6S have been completed, MW6S may also be sampled on a semi-annual basis.

Monitoring wells MW1S, MW4S, MW5S, MW7S, MW8S, MW10S, MW11S, MW12S, MW13S will monitor conditions in the limestone and gravelly clay that may be related to the slurry wall/grout curtain performance via groundwater mounding. Monitoring wells MW1D, MW2D, MW3D, MW4D, MW5D, MW6D, MW7D, MW8D, MW9D, MW10D, MW11D, MW12D, MW13D, MW-14, MW-15, MW-16 and MW-17 will monitor groundwater conditions in the shale for detection monitoring. Due to groundwater mounding centered at the landfill, the proposed background wells (MW7D and MW8D) may not be appropriate for statistical analyses using interwell comparisons. Also in the November 17, 2016 groundwater monitoring report, MW8D is excluded as representing background in the shale per DEQ letter dated July 25, 2014 due to high concentrations of certain constituents.

- AEP-PSO addresses the potential of contaminated groundwater migrating past the ends of the slurry wall/grout curtain as well as other pathways due to groundwater mounding and evaluates other methods of contaminant detection related to performance and detection monitoring.

Please provide a revised groundwater monitoring network that addresses the items in this letter. If you have any questions or comments concerning this letter please contact Ms. Cindy Hailes at (405) 702-5114.

Sincerely,



Hillary Young, P.E.
Chief Engineer
Land Protection Division

HY/ckh



SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN
Governor

March 15, 2018

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Ms. Jill Parker-Witt, P.E.
American Electric Power
502 North Allen Avenue
Shreveport, LA 71101

Re: Annual Groundwater Monitoring Report – Landfill
Public Service Company of Oklahoma-Northeastern Power Station Ash Landfill
Rogers County
Solid Waste Permit No. 3566010

NOTICE OF DEFICIENCY

Dear Ms. Parker-Witt:

On February 2, 2018, the Department of Environmental Quality (DEQ) received the Annual Groundwater Monitoring Report – Landfill CCR Management Unit (Report) for Northeastern Power Station Landfill (NPS). Oklahoma Administrative Code (OAC) 252:517—9-1(e) requires NPS to prepare the annual groundwater monitoring and corrective action report to document the status of the coal combustion residual (CCR) landfill. The report must summarize key actions completed, problems encountered and resolutions to those problems and project key activities for the upcoming year. At a minimum, the Report must contain the information in OAC 252:517-9-1(e)(1) through (e)(5). The Report is to be placed in the facility's operating record and on NPS's publicly accessible Internet site. Also, the Report is to be submitted to DEQ for review and approval per OAC 252:517-9-1(g).

DEQ reviewed the Report and determined the following deficiencies:

1. The existing monitoring well network surrounding the landfill consists of monitoring wells MW1S through MW13S, MW1D through MW13D and MW-14 through MW-17. The groundwater monitoring network that NPS has proposed contains upgradient wells MW-7D and MW-8D and downgradient wells MW-3D, MW-6D, MW-9D and MW-15. DEQ has not approved the groundwater monitoring well network that NPS has proposed. The Report only contained information on the NPS proposed monitoring well network. The Report should contain the information in OAC 252:517-9-1(e)(1) through (e)(5) for the complete monitoring well network that DEQ has currently approved. Please submit the required information for monitoring wells MW1S through MW13S, MW1D through MW13D and MW-14 through MW-17.



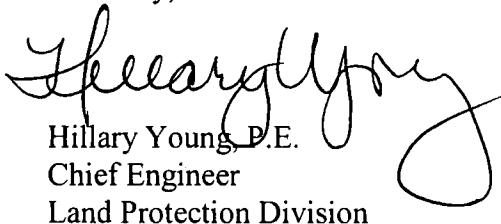
Ms. Jill Parker-Witt, P.E.
American Electric Power – Northeastern Power Station
March 15, 2018
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2. Monitoring well 7-D was not included on the potentiometric maps. Please submit revised maps that include MW-7D. In a letter dated January 16, 2018, DEQ, on page 3, requested NPS to review whether MW-7D and MW-8D were appropriate for statistical analyses due to groundwater mounding at the landfill. Please address this issue as it pertains to the 2017 groundwater monitoring statistical analyses results.
3. OAC 252:517-9-1(e)(3) requires all the monitoring data obtained under OAC 252:517-9-1 through OAC 252:517-9-9 to be submitted in the annual groundwater monitoring and corrective action report. The Report did not contain the statistical analyses performed on the data after the sampling events. Please submit the statistical analysis for this Report within 60 days of receipt of this letter and include statistical analyses information in the 2018 annual groundwater monitoring and corrective action report.

Additionally, on page 6, Section VIII. Description of Any Problems Encountered in 2017 and Actions Taken states the wells are allowed to recharge at least eight (8) hours. NPS may allow the wells to recharge 24 hours and if needed to provide sufficient volume for sampling, may request longer recharge periods to complete the sampling efforts.

If you have any questions, please contact Ms. Cynthia Hailes, P.E. at (405) 702-5114.

Sincerely,



Hillary Young, P.E.
Chief Engineer
Land Protection Division

HY/ckh

APPENDIX C. PERMITTING PROCESS SUMMARY

Steps	Tier I	Tier II	Tier III
Filing - Applicant files application, pays any required fee, and provides landowner notice. Applicant may meet with the DEQ staff prior to this.	Yes	Yes	Yes
Notice of filing - Applicant publishes notice in one newspaper local to site.	No	Yes	Yes
Process meeting - Notice - 30-day opportunity is published with notice of filing. DEQ holds meeting if requested and sufficient interest is shown.	No	No	Yes
Administrative completeness review - DEQ reviews application and asks applicant to supply any missing information.	Yes	Yes	Yes
Technical review - DEQ reviews application for technical compliance and requests applicant to cure any deficiencies.	Yes	Yes	Yes
Draft permit or draft denial - DEQ prepares this after completing review.	No	Yes	Yes
Notice of draft permit, public comment period and public meeting request opportunity - Applicant publishes this in one newspaper local to site. (DEQ publishes notice of draft denial.)	No	Yes	Yes
Public comment period - 45 days for hazardous waste treatment, storage or disposal draft permits; 30 days for all others.	No	Yes	Yes
Public meeting - Conducted by DEQ if held	No	Yes	Yes
Review of comments - DEQ (written response)	No	Yes	Yes
Proposed permit - DEQ prepares this in response to comments on draft permit	No	No	Yes
Notice of proposed permit - Applicant publishes, in one newspaper local to site, notice of 20-day opportunity to review permit and request administrative hearing.	No	No	Yes
Administrative permit hearing - Conducted by DEQ if held. Results in final order.	No	No	Yes
Issuance or denial - DEQ's final decision	Yes	Yes	Yes